

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
13 December 2001 (13.12.2001)

PCT

(10) International Publication Number
WO 01/95269 A2

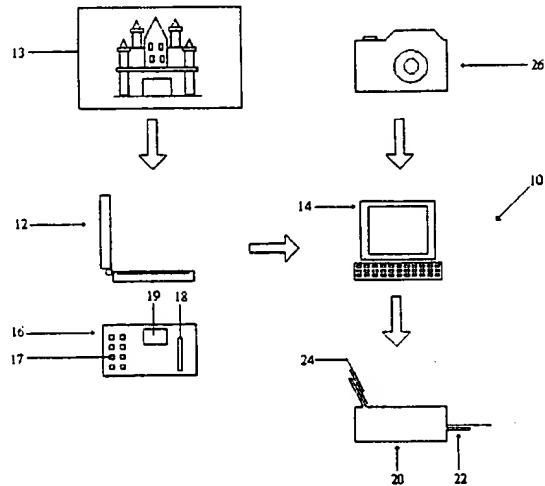
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| (51) International Patent Classification ² : | G07F 7/00 | CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EC, EE, EE (utility model), ES, FI, FI (utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW. |
| (21) International Application Number: | PCT/ZA01/00071 | |
| (22) International Filing Date: | 31 May 2001 (31.05.2001) | |
| (25) Filing Language: | English | |
| (26) Publication Language: | English | |
| (30) Priority Data: | 2000/2834 6 June 2000 (06.06.2000) ZA | |
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| (81) Designated States (national): | AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, BZ, CA, | |

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DIGITAL VENDING APPARATUS



(57) **Abstract:** The invention provides a vending apparatus comprising scanning means for capturing digital images of scanned information, processing means that is connected to the scanning means for receiving digital images therefrom and for processing the digital images, the processing means having software for accessing the Internet and for enabling the transmission of electronic mail including one or more digital images captured by the scanning means, and control means for controlling the operation of the scanning means and the processing means, the control means including a vending unit having payment accepting means for accepting payment means for operating the vending apparatus. The vending apparatus may include a digital camera for capturing the digital images and/or reading means for reading a data storage device of a digital camera.

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DIGITAL VENDING APPARATUS

Field of the Invention

5 This invention relates to a vending apparatus.

Summary of the Invention

According to the invention there is provided a vending apparatus comprising
10 scanning means for capturing digital images of scanned information;
processing means that is connected to the scanning means for receiving digital
images therefrom and for processing the digital images, the processing means having
software for accessing the Internet and for enabling the transmission of electronic mail
including one or more digital images captured by the scanning means; and
15 control means for controlling the operation of the scanning means and the
processing means, the control means including a vending unit having payment
accepting means for accepting payment means for operating the vending apparatus.

The payment accepting means may include a portion into which payment means,
20 money, or an item having a monetary value can be inserted for operating the vending
apparatus.

The one or more digital images included in the electronic mail may be in the form
of attachments to the electronic mail.

The vending apparatus may include printing means having a supply of sheet elements having pre-printed information marked thereon, the printing means being connected to the processing means for printing the digital images captured by the scanning means on said sheet elements. More particularly, the sheet elements may be of postcard size having information of a type typically printed on the rear of the postcards, printed on one side thereof. In another embodiment, the sheet elements may have a size and configuration rendering the sheet elements suitable for use as greeting cards. As such, each sheet element may define a fold line along which the sheet element can be folded into two halves, with an inner side of at least one of the halves having said pre-printed information marked thereon.

The vending apparatus may include a digital camera that is connected to the processing means, for capturing digital images. The processing means may be operable to receive and process the digital images captured by the digital camera to permit the images to be sent as an electronic mail attachment. Alternatively, the processing means may be operable to print the digital images via the printing means as described hereinabove.

20 The vending apparatus may include drive means for an information recordal device such as a floppy disc or hard disc, with the processing means being operable to save said digital images to the information recordal device.

Certain digital camera's use RAM based cards, flash memory devices and other recordable media for storing data and thus the vending apparatus may include a reading means for reading said recordable media when brought into data transfer communication with said reading means and storing this read data to a hard disc or 5 other storage device of the vending apparatus.

The control means may include a control panel having a number of touch pads associated with different functions that can be selected, that can be depressed by a user. In use, a number of options may be selected by a user, including

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- a) scanning an image and sending the scanned image as an electronic mail attachment to an addressee;
- b) scanning an image and printing the scanned image on a sheet element in 15 the form of a postcard or a greeting card;
- c) scanning an image and saving the scanned image to an information recordal device;
- d) taking a photograph that is captured as a digital image, with the digital 20 camera and sending the image of an electronic mail attachment to an addressee;

- e) taking a photograph that is captured as a digital image, with the digital camera and printing the image on a sheet element in the form of a postcard or a greeting card;
- 5 f) taking a photograph that is captured as a digital image with the digital camera and saving the image to an information recordal device.

Each of the above functions will be permitted upon the insertion of money or an item having a monetary value, into the vending unit of the control means.

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Description of the Drawings

Further features of the invention are described hereinafter by way of a non-limiting example of the invention, with reference to and as illustrated in the 15 accompanying diagrammatic drawing.

With reference to the drawing, a vending apparatus 10 in accordance with the invention is illustrated. The vending apparatus 10 comprises, broadly, scanning means in the form of a digital scanner 12 for capturing digital images of scanned information 13, 20 processing means in the form of a processor 14 that is similar to the processor of a personal computer, that is connected to the scanner for receiving digital images therefrom and for processing the digital images, and control means in the form of a control unit 16 for controlling the operation of the scanner and the processor, the control means including a vending unit 18 into which money can be inserted for operating the 25 vending apparatus.

The scanner, the processor and the control unit are housed together in a single housing.

The vending apparatus 10 includes a printer 20 that is housed in the housing 5 and that is supplied with pre-printed sheet elements 24 from two trays 22 in which the sheet elements are stowed. Postcard-sized sheet elements having information of a type typically printed on the rear side of postcards, printed on one side thereof, are stowed in one of the trays. The other tray holds sheet elements having a size and configuration which render the sheet elements suitable for use as greeting cards. Each of the greeting 10 cards defines a fold line along which the greeting cards can be folded into two halves, with an inner side of one of the halves having pre-printed information marked thereon.

The vending apparatus includes a digital camera 26 that is connected to the processor via a flexible cable, the processor including a connecting port to which the cable 15 can be connected. The digital camera is operable to capture digital images and the processor is operable to receive the process the digital images captured by the digital camera.

The vending apparatus includes a disc drive that is housed in the housing, the disc drive being operable to receive a hard disc onto which digital images captured by 20 the scanner and/or the digital camera can be saved. As such, the processor has software enabling captured digital images to be saved to a hard disc which can then be removed by a person using the vending apparatus for further manipulation and/or transmission of the digital images by a user. The processor also includes software for accessing the Internet and for enabling the transmission of electronic mail having as an 25 attachment, one or more digital images captured by the scanner and/or the digital camera.

The control unit 16 has a control panel having a number of touch pads 17 some of which are associated with alpha-numeric characters, which can be depressed by a user of the vending apparatus to select a number of different functions to be performed by the apparatus. The control unit includes a visual display 19 unit on which information 5 can be displayed, that can be read by a user.

The vending unit 18 is operable to accept money in the form of both coins and notes and is operable to issue change to a user after a particular function has been selected by the user.

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In use, the options that may be selected by a user includes the following:

- a) scanning an image via the scanner and sending the scanned image as an electronic mail attachment to an addressee;
- b) scanning an image via the scanner and printing the scanned image on a sheet element in the form of a postcard or a greeting card.
- c) scanning an image using the scanner and saving the scanned image to a hard disc;
- d) taking a photograph with the digital camera and sending the digital image of the photograph as an electronic mail attachment to an addressee;

- e) taking a photograph with the digital camera and printing the digital image on a sheet element in the form of a postcard or a greeting card;
- 5 f) taking a photograph with the digital a camera and saving the image to the hard disc which can then be removed by the user.

In use, the Applicant envisages that the abovementioned functions of the vending apparatus can be performed in response to the instructions of a user that are 10 entered via the control panel of the control unit. As such, the Applicant envisages that a user will first make a selection as to the form of sheet element desired, i.e. a postcard or a greeting card. After selecting the choice via the touch pads on the control panel, the user will be prompted to insert a payment amount, the amount being displayed on the visual display unit of the control panel. Money is then deposited into the vending unit. 15 After the correct amount has been paid, further operation of the apparatus will be permitted in accordance with the functions selected.

If a scanned image is to be used, the image is inserted into the scanner where it is scanned and thereafter sized by the processor to fit the selected form of sheet 20 element. The digital image is then printed onto the selected sheet element by the printer and is then deposited in an output tray where the sheet element in the form of a postcard or greeting card can be retrieved by the user.

If it is desired to send the digital image as an electronic mail (e-mail) attachment, the user will be prompted via the control panel of the control unit to enter the e-mail address of the intended addressee using the touch pads. The addressee's e-mail address is then entered and the user will then be prompted to enter a message to accompany the digital image attachment. The user will then have the option of typing a message using the touch pads if this is desired. The digital image attachment and the message, if any, can then be sent to the addressee via the modem.

If the user wishes to save the digital image to a hard disc, then the user will be prompted to insert a hard disc into the disc drive and again using the touch pads will instruct the processor to save the digital image to the disc.

Similarly, if the user wishes to photograph to be taken with the digital camera, the digital image captured by the camera can be saved to disc, sent as an electronic mail attachment or a hard copy thereof can be printed in the form of a postcard or greeting card.

The Applicant believes that the vending apparatus in accordance with the invention provides a simple and convenient apparatus for generating customised information postcards and greeting cards.

Claims

1. A vending apparatus comprising scanning means for capturing digital images of scanned information;
- 5 processing means that is connected to the scanning means for receiving digital images therefrom and for processing the digital images, the processing means having software for accessing the Internet and for enabling the transmission of electronic mail including one or more digital images captured by the scanning means; and control means for controlling the operation of the scanning means and the
- 10 processing means, the control means including a vending unit having payment accepting means for accepting payment means for operating the vending apparatus.
2. A vending apparatus as claimed in claim 1, in which the payment accepting means includes a portion into which payment means, money, or an item having a
- 15 monetary value can be inserted for operating the vending apparatus.
3. A vending apparatus as claimed in claim 1 or claim 2, wherein the one or more digital images are in the form of attachments to the electronic mail.
- 20 4. A vending apparatus as claimed in any one of the preceding claims, which includes printing means having a supply of sheet elements having pre-printed information marked thereon, the printing means being connected to the processing means for printing the digital images captured by the scanning means on said sheet elements.

5. A vending apparatus as claimed in claim 4, wherein the sheet elements are of postcard size having information of a type typically printed on the rear of the postcards, printed on one side thereof.

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6. A vending apparatus as claimed in claim 4, wherein the sheet elements have a size and configuration rendering the sheet elements suitable for use as greeting cards.

7. A vending apparatus as claimed in claim 6, wherein each sheet element includes
10 a fold line along which the sheet element can be folded into two halves, with an inner side of at least one of the halves having said pre-printed information marked thereon.

8. A vending apparatus as claimed in any one of the preceding claims, including a digital camera that is connected to the processing means, for capturing digital images.

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9. A vending apparatus as claimed in claim 8, wherein the processing means is operable to receive and process the digital images captured by the digital camera to permit the images to be sent by electronic mail.

20 10. A vending apparatus as claimed in claim 8, wherein the processing means is operable to print the digital images via the printing means.

11. A vending apparatus as claimed in any one of claims 8 to 10, which includes data storage means with the processing means being operable to save said digital images to said storage means.
- 5 12. An apparatus as claimed in claim 11, wherein the data storage means includes drive means for an information recordal device such as a floppy disc or hard disc, with the processing means being operable to save said digital images to the information recordal device.
- 10 13. An apparatus as claimed in claim 11, including reading means for reading data from data storage devices including RAM based cards, flash memory devices, digital camera compatible recordable media, when said reading means is brought into data transfer communication with said data storage devices and storing this read data to a hard disc or other storage device of the vending apparatus.
- 15 14. An apparatus as claimed in any one of the preceding claims, in which the control means includes a control panel having a number of touch pads associated with different functions that can be selected, that can be depressed by a user.
- 20 15. An apparatus, substantially as hereinbefore described and illustrated.
16. A new apparatus substantially as herein described.

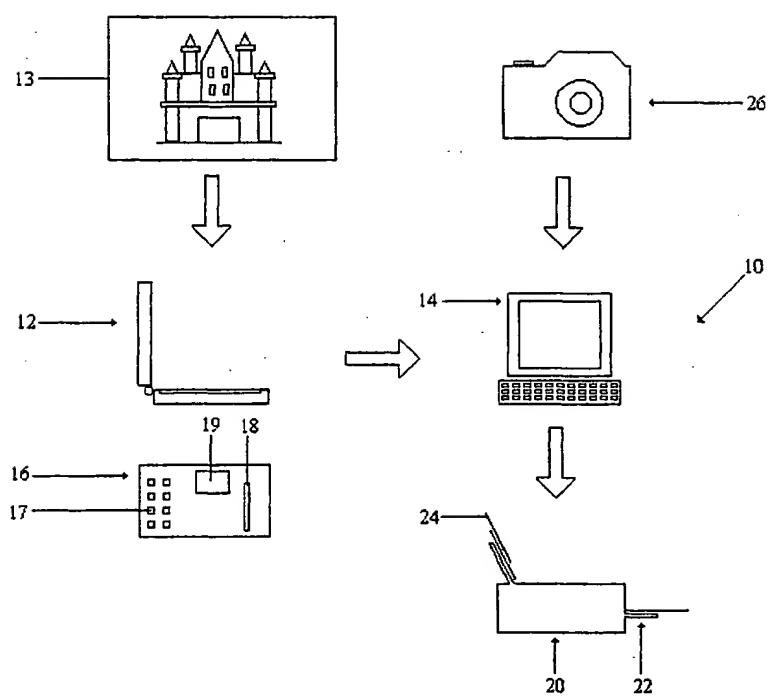


Figure 1